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Southwest Border Rural Health Research Center
College of Medicine, University of Arizona
2501 E. Elm Street
Tucson, Arizona 85716
(602) 626-7946

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Women's Health Issues and Access to Medical Care In A U.S.-Mexico Border Community

Ivy L. Schwartz, M.D.
Paul La Brec,B.A.
Jill Guernsey de Zapien, B.A.
Nuria Homedes, M.D.,Dr. PH.
Martha Moore-Monroy, B.A., M.A.

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THE AUTHORS

Ivy L. Schwartz, M.D., is a Research Assistant Professor in the Department of Family and Community Medicine at the University of Arizona College of Medicine. Her research interests include U.S./Mexico border health, interpersonal violence, and substance abuse.

Jill Guernsey de Zapien, B.A., is a program coordinator at the Rural Health Office. She coordinates several research projects that focus on U.S.-Mexico border health issues.

Nuria Homedes, M.D., Dr. P.H., is a Faculty Research Instructor. She is involved in Health Services Utilization Studies along the U.S.-Mexico Border.

Paul A. LaBrec, B.A., is a Research Specialist with the SBRHRC. His research interests include epidemiology, U.S.-Mexico border health, and health care utilization.

Martha Moore-Monroy, B.A., M.A. is a Research Specialist with the Southwest Border Rural Health Research Center. Her research interests include environmental health, occupational health, and adolescent health issues in Latin America and along the U.S.-Mexico Border.

Ivy L. Schwartz, M.D., is a Research Assistant Professor in the Department of Family and Community Medicine at the University of Arizona College of Medicine. Her research interests include U.S./Mexico border health, interpersonal violence, and substance abuse.

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ABSTRACT

This paper reports the results of a study of the health status and health services utilization of women of reproductive age living in the U.S./Mexico border community of Nogales, Arizona. Data were obtained through a community survey of female residents, ages 18 to 44, and a survey of primary medical care providers. Health issues studied included use of preventive health strategies (family planning, Pap smears, medical provider breast examinations, breast self-examination), use of medical services (prenatal care and general medical care), substance use (alcohol, tobacco and other drugs), adult domestic violence, and eating disorders.

Over 50% of women had a recent pap smear and provider breast examination, and had performed breast self-examination. Two-thirds of women reported current use of family planning methods, and over three-quarters of pregnant women had started prenatal care in the first trimester of pregnancy. It was likely that the majority of preventive services were provided in the context of prenatal care. The primary barrier to receiving medical care was financial: prohibitive cost or lack of insurance.

Use of tobacco and alcohol and domestic abuse were prevalent, and were underestimated by medical providers. Symptoms suggesting eating disorders were not uncommon. The majority of women reporting alcohol and tobacco use and domestic violence had received recent perinatal or medical care services. These data emphasized the vital role that health professionals can play in the identification and referral of women and their families for necessary treatment.

I. Introduction

The data presented here were obtained as part of the Primary Health Care Review (PHCR), funded by the Carnegie and Pew Foundations and administered by the Pan American Health Organization, from 1989-91. The PHCR was a binational multisite effort to evaluate the health status of women of reproductive age, children, and adolescents, as well as environmental health issues along the U.S.-Mexico border.

This report will discuss selected health issues of women living in one border community, Nogales, Arizona. Health issues to be examined include utilization of health care services (e.g., perinatal care, preventive gynecological care, and general medical services), substance use (e.g., alcohol, tobacco, and other drugs), adult domestic violence, and eating disorders.

Most data were obtained from a survey of Nogales, Arizona, medical providers and a community-based survey of Nogales, Arizona, women. For more information concerning the scope of the Carnegie-Pew-PAHO project, as well as a more detailed description of the methodology employed, please see Homedes and LaBrec (1991).

II. Sample and Methods

The community-based survey was carried out during November, 1990. Thirteen women from Nogales were trained as interviewers for the survey. A multistage stratified sample with probability of selection proportionate to the cluster size was drawn. Forty clusters were selected with an average of 36 households in each cluster.

The target population was women between the ages of 18 and 44 who had had a baby during the two years prior to the survey, or had earned $500 or more from work during the past year or were working at the time of the interview (or both). A total of 411 women were interviewed, including 94 categorized as "pregnant only," 248 who were "working only," and 69 who were both "pregnant" and "working" women. The non-response rate for pregnant women was 14%; that for working women was 27%. At least three attempts were made to complete an interview before a woman was considered a non-respondent. Interviews were conducted seven days a week, from 9 AM to 8:30 PM.

The medical provider survey was performed in order to obtain information regarding providers' views of important health problems for women aged 18 to 44, as well as possible strategies for improving the health of this population. All 16 primary care providers practicing in Nogales were interviewed (15 physicians and one nurse practitioner). Interviews were primarily done in person; three were initially administered in person and completed by telephone. The interviews took approximately 45 minutes. The interviews were carried out during the spring of 1990.

III. Sociodemographic Characteristics of Sample

During the PHCR community survey, 411 women were interviewed. The ages of these respondents ranged from 18 to 44 years, while both the mean and median ages were 30 years (Standard Deviation (SD) = 7.3).

The majority of respondents (61.1%) were married/cohabiting; 24.3% were single; 13.6% were separated or divorced; and 1.0% were widowed. Years of

education ranged from 1 to 19, with a mean of 11.0 and a median of 12.0 (SD = 2.9). More than three-quarters (78.1%) of the respondents had no more than an eighth grade education. Nearly one-third (29.9%) of U.S.-born respondents had greater than the median level of education (12 years), while only 18.8% of Mexican-born documented and only 3.6% of undocumented respondents had this level of education ($p < .005$).

The vast majority of respondents (97.1%) classified themselves as either Mexican (55.7%), Mexican American (22.5%), Hispanic (17.6%), Chicano (1.0%), or Other Latin American (0.2%). The remainder described themselves as either Anglo (2.7%) or Asian/Pacific Islander (0.2%).

Yearly family incomes were reported in the following categories: 1) Under $6,000; 2) $6,000-$9,999; 3) $10,000-$19,999; 4) $20,000-$29,999; 5) $30,000-$39,000; and 5) $40,000 or more. One-fifth (20.8%) of respondents reported a family income of under $6,000; 22.6% reported an income between $6,000-$9,999; 28.3% between $10,000-$19,999; 12.9% between $20,000-$29,999; 5.7% between $30,000-$39,999; and 9.8% reported a family income of at least $40,000. As these figures demonstrate, 43.4% of families had incomes below $10,000.

Just over half of respondents (53.9%) were covered by a health plan at the time of their interview. However, only 41% of women with family incomes under $10,000 had health plan coverage, whereas 65% of those with family incomes of at least $10,000 and 77% of those with incomes of at least $20,000 had health insurance ($p < .001$). A somewhat greater proportion of women above the median age (30

years) had health insurance (59.2%) than did women below the median age (49.1%) ($p = .051$).

Nearly two-thirds (63.7%) of respondents were born in Mexico; 35.8% were born in the United States; 0.5% were born in another country. Three of the women born in Mexico had lived in the U.S. less than a year at the time of the survey. The mean number of years in the U.S. for all foreign-born respondents was 13.5; the median was 12 (SD = 9.6). Seventy-five women had lived in the U.S. no more than five years at the time of the survey. This figure accounted for 28.4% of foreign-born respondents and 18.2% of all respondents. One-hundred-eighty-nine women had lived in the U.S. more than five years, and 147 were U.S.-born.

Foreign-born women who had lived in the U.S. no more than five years ("recent immigrants") had lower education levels than either those who had lived in the U.S. more than five years ("settled immigrants") or those who were U.S.-born. The mean education level for recent immigrants was 9.5 years, while that of settled immigrants was 10.4 years and that of U.S.-born women was 12.5 years. The difference in mean years of education between recent immigrants and settled immigrants was significant at $p < .05$, while the differences between both recent and settled immigrants and U.S.-born women were significant at $p < .001$).

Differences in income between recent immigrants, settled immigrants, and U.S.-born women followed a pattern similar to that of educational attainment: recent immigrants had the lowest mean income, U.S.-born women had the highest. Mean

income, measured using categories 1 through 6 above, was 2.05 for recent immigrants, 2.80 for settled immigrants, and 3.42 for U.S.-born women. All income correlations were significant to $p < .001$.

Only 10.7% of foreign-born women ($n = 28$) reported undocumented status (i.e., that they did not have papers), while the remaining 89.3% reported having papers. The 28 undocumented women had lived in the U.S. a median of 3.0 years (SD = 2.1) at the time of the survey.

The mean size of the respondent's family residing in the respondent's household was 3.9 persons, the median was 4.0. Household size ranged from one to 10 persons.

Results

IV. a. Use of Preventive Health Services: Family Planning

Women who had not recently given birth and were not currently pregnant were questioned about current and past use of family planning methods. Sixty-seven percent (or 250 women) were currently using a family planning method. Sociodemographic variables did not influence likelihood of using or not using family planning. Among women not currently practicing family planning, the majority (73% or 90 women) perceived no need to do so (e.g., "have not been with anyone," "my husband is not here," "not sexually active," "don't have a partner," "I'm separated," "I'm not married," etc.). Nine percent (or 11 women) voiced negative perceptions of various methods.

Women were asked what specific methods they have used. Table 1 shows currently used methods and methods ever used by the women.

TABLE 1

Women's Use of Family Planning
by Method

Method	Ever Used		Currently Using	
	%	n	%	n
Pills	67	277	42	104
Condom	31	126	14	36
Rhythm	19	77	7	17
Tubal Ligation/Hysterectomy	16	66	27	66
Injection	14	56	4	11
Jelly, Cream, or Foam	11	46	4	9
IUD	10	40	3	7
Jelly/Cream/Foam and Condom	8	32	2	4
Diaphragm	5	21	0	0
Cervical Cap	1	3	0	0
Other	2	8	4	9

Medical providers estimated that 75% of their female patients practice family planning. They ranked methods used from most to least common as follows:

Oral contraceptive pills
Condoms
Combination (condom, jelly/cream/foam)
Injection
Tubal ligation or hysterectomy
Jelly/cream/foam
Natural family planning
Diaphragm
Other
Cervical Cap

Comparing providers' perceptions and the data from the community survey, providers appear to underestimate the use of female sterilization and the use of injections.

In an open-ended question format, women were asked about perceived barriers to use of family planning services. Fifty-two percent (or 205 women) stated they had no problems obtaining these services. Those having problems mentioned the following: 22% did not want services or did not want to receive services locally, 12% cited administrative, cultural or quality of care concerns, 11% mentioned transportation or communications problems, and 0.05% reported access or availability problems.

Barriers to the use of family planning cited by medical providers included no centralized source of information, no high school sex education, lack of education regarding family planning, lack of motivation to use family planning, financing difficulties, and lack of knowledge about how to obtain services.

In addition, 15% (or 62 women) reported becoming pregnant while practicing family planning. Medical providers estimated that only 59% of their patients have "an adequate knowledge" of family planning. The extent to which unintentional pregnancy and inadequate knowledge of family planning methods are related cannot be determined from the data set.

Women were asked for any suggestions they might have to improve family planning services. Sixty-nine percent (or 211 women) made suggestions for improvement. Of those made, 21% were economic suggestions (need for lower cost care, more government help, insurance, free medicine), 21% related to the need for better health education and "explanations," 15% related to a desire for more and better qualified personnel, 13.5% stressed the need for a family planning clinic, and 11% asserted the need for outreach to the community and to schools.

Suggestions for improvement from medical providers included centralized family planning care, community and high school family planning education, more discounted rates, and free contraceptives.

b. Use of Preventive Health Services: Pap (Cervical) Smears

Women were asked whether they had a pap smear in the past year. Fifty-nine percent (or 242 women) reported having had a pap smear. Married women were more likely to have had a pap smear (67% [n = 168]) than single women (39% [n = 39]) ($p = .0000$). Those who obtained pap smears completed slightly more schooling (11.3 versus 10.4 years of schooling). Women with children under five were also more likely

to have had a pap smear. Seventy-six percent (n = 176) of women with children under five had a Pap smear versus 37% (n = 65) of women without children under 5; (p = .0000).

Women who had Pap smears were more likely to have health insurance. Sixty-seven percent (n = 148) of women with insurance had a Pap smear versus 50% (n = 94) of those without insurance (p = .0004).

Women who had been pregnant in the past two years were significantly more likely to have had a Pap smear: 83% (n = 135) of "pregnant" women had a Pap smear compared with 43% (n=107) of "nonpregnant" women (p=.0000). Interestingly, having a Pap smear in the past year was not related to timing of first prenatal visit (first trimester versus third trimester or no care) for pregnant women.

Conversely, working women were less likely to have had a Pap smear. Fifty-two percent (n = 166) of workers versus 81% (n = 76) of nonworkers had Pap smears (p = .0000).

Contrary to the data reported by Marks et al. (1990) from the Hispanic Health and Nutrition Examination Survey (HHANES), smokers were as likely as nonsmokers to have had a Pap smear in the past year. In addition, obtaining Pap smears was not related to age, family income, number of years in the U.S., country of birth, documented status, or method of payment for health care.

Although a smaller proportion of women in this survey had a Pap smear (59% in the past year) than found in the HHANES (75% had a Pap smear in the past two

years), the data supported the HHANES findings that obtaining Pap smears was most closely related to access to health care services (Solis et al., 1990).

c. Use of Preventive Health Services: Medical Provider Breast Examinations

Women were asked if they had had a breast examination performed by a doctor or nurse in the past year. Sixty-one percent of women (or 250 women) reported having had a breast examination. These women were significantly more likely to be married or living with their partner than to be single. Sixty-nine percent (n = 174) of married/cohabiting women had had a breast exam versus 43% (n = 43) of single women; p=.0000). They were also more likely to have children under five years old Seventy-two percent (n = 166) of women with children versus 47% (n = 107) of women without children under five had had a breast examination (p = .0000).

Women who had provider breast examinations were also more likely to have health insurance. Seventy-one percent (n = 157) of women with health insurance had a breast examination versus 49% (n = 93) of those without insurance (p = .0000).

As found with Pap smears, women who had a pregnancy in the past two years were significantly more likely to have had a breast examination. Seventy-seven percent (n = 126) of "pregnant" women had had a breast examination compared with 50% (n = 124) of "nonpregnant" women (p = .0000).

However, as with Pap smears, working women were less likely to have had a breast examination. Eighty percent (n = 75) of nonworking women versus 55% (n = 175) of working women (p = .0000) had had a breast examination.

Age, education, number of years living in the U.S., country of birth, and documented status were not related to having had a breast examination.

These data are consistent with results from the recent HHANES indicating that obtaining provider breast examinations was most closely related to access to medical care services (Solis et al., 1990). However, a smaller proportion of women in this survey (61% in the past year) had obtained these services compared with the proportion in the HHANES (78% within the past two years).

d. Breast Self-Examination

Women were also questioned about performing breast self-examination in the past year. Fifty-nine percent (or 241 women) reported performing a breast self-examination. The median number of times they reported doing breast self-examination was 10. The most frequent response was 12 times, or monthly. The results ranged from once to 365 times (S.D. = 98.08).

Women were more likely to examine their breasts if they were married/cohabiting. Sixty-five percent (n =163) of married/cohabiting women examined their breasts versus 43% (n = 43) of single women (p = .0034). Women performing breast self-examination were also slightly older (mean of 31.6 years versus 28 years), and were more likely to have graduated from high school. Sixty-five percent (n = 147) of graduates performed breast self-exams versus 51% (n = 94) of women who did not graduate from high school (p = .003).

Women performing breast self-examination were more likely to have a family income greater than $10,000 (66% or 159 women examined their breasts) compared

to women with family incomes less than or equal to $10,000 (48.5% or 82 women examined their breasts) (p = .0004). In fact, as income level increased, the proportion of women examining their breasts increased.

Interestingly, working women were more likely to perform breast self-examination (62% [n = 197] of workers versus 47% [n = 44] of nonworkers; p = .0072). These data are contrary to the findings concerning working women obtaining medical provider breast examinations and Pap smears, in which working women were less likely to have obtained these services than nonworking women. These data suggest problems with access to medical care for working women.

Although breast self-examination was not related to number of years living in the U.S., women with documented status were significantly more likely to perform breast self-examination. Sixty percent (n = 230) of documented women versus 39% (n = 11) of undocumented women examined their breasts (p = .0299). In addition, there was a statistical trend (p = .0748) for U.S.-born women to be the most likely, Mexican-born documented women to be the next most likely, and Mexican-born undocumented women to be the least likely to perform breast self-examination. Sixty-two percent (n = 91]) 59% (n = 139), and 39% (n = 11), respectively, of these women performed breast self-examination, respectively).

Having health insurance, using health services during the past year, and having had a pregnancy in the past two years were not related to performing breast self-examination. Again, these data are contrary to the findings showing significant relationships between these variables and obtaining Pap smears and provider breast examinations.

A survey of women in Los Angeles (Reeder et al., 1980) revealed that 61% had performed breast self-examination sometime in the past, and 37% did so monthly. The authors noted that Hispanic and White women were less likely to perform breast self-examination than Black women in their sample. Although the use of breast self-examination was measured in differing ways, it appears that a greater proportion of women in the sample performed breast self-examination monthly (nearly half of the women) than in the Los Angeles survey.

V. Use of Perinatal Services: Prenatal Care

Women in the community survey were asked a number of questions regarding prenatal care, including start of care, number of visits, places where care was obtained, how it was paid for, and perceived barriers to obtaining care. These data will be summarized here. For a more detailed analysis, see Homedes and LaBrec (1991).

The majority of women (78% or 125 women) had their first prenatal visit during the first trimester of pregnancy; 20% (or 32 women) started care during the second trimester and 3% (or four women) during the third trimester. Only two women reported no prenatal care. Early start of prenatal care was associated with higher educational level and higher family income. Although undocumented women were more likely to receive late prenatal care, this was statistically explained by their lower educational attainment and lower family income.

Similarly, 79% (or 129 women) reported that they had nine or more prenatal visits. Women who had less than five visits had lower educational attainment and lower family incomes.

Women reported using a number of sources for prenatal care (Table 2). The most common sources for care were a private physician in Nogales, and the community health center in Nogales. Approximately 12% (or 19 women) used various Mexican health care providers. Women who started care in the second or third trimester of pregnancy were more likely to use the community health center.

TABLE 2

Sources of Prenatal Care Used by Residents of Nogales, Arizona (Fall 1990)

Source	Number of Women Using Each Source (n = 161)	Percent of Women*	Percent of Places
Private Doctor in Nogales, AZ	75	46.6	36.4
Community Health Center	63	39.1	30.6
AZ Hospital Outside Nogales	20	12.4	9.7
Private Doctor in Nogales, SON	15	9.3	7.3
Hospital in Nogales, AZ	12	7.5	5.8
Other U.S. Service	12	7.5	5.8
Pharmacy in Nogales, AZ	3	1.9	1.5
Health Dept. in Nogales, AZ	2	1.2	1.0
Pharmacy in Nogales, SON	2	1.2	1.0
Partera in Mexico	1	0.6	0.5
Salubridad	1	0.6	0.5
Total Person/Visits	206	127.9	100.1

* Percentages do not add to 100 because respondents gave up to four responses each.
Mexican services appear in italics.

Sources of payment for prenatal care differed between women reporting early (first trimester) versus late start of care. Women receiving late care were more likely to use AHCCCS (Arizona Health Care Cost Containment System, Arizona's Medicaid program) for services; they were less likely to use cash or private insurance to pay for care. Tables 3 and 4 show payment methods for women reporting early and late start of care.

TABLE 3

Sources of Payment for Women With Early Prenatal Care
Nogales, Arizona (Fall 1990)

Source	%
AHCCCS	40
Private Insurance	30
Cash	23
Installments	21
Special program	4
Sliding fee	3
CHAMPUS	1
Free	1

- Percents do not add to 100 because women could list up to three sources of payment.

TABLE 4

Sources of Payment for Women With Late Prenatal Care
Nogales, Arizona (Fall 1990)

Source	%
AHCCCS	50
Private Insurance	24
Cash	16
Installments	16
Special Program	8
Sliding Fee Scale	3

- Percents do not add to 100 because women could list up to three sources of payment.

There were no significant differences between start of prenatal care, number of visits, places where care was obtained, or sources of payment between working and nonworking women.

Unfortunately, we do not have data regarding insurance coverage for women throughout their pregnancies. However, regarding current insurance coverage (i.e. at the time of the survey), there was little difference in insurance coverage between women who reported early prenatal care (55.6% or 70 women had health insurance) and those who reported late care (52.6% or 20 women had health insurance). Overall, 54% (221 women) of women stated that they had some form of health insurance at the time of the survey.

Women in the community survey were asked about perceived barriers to obtaining prenatal care. Forty-three percent of women (or 69 women) mentioned problems. Of the problems reported, 38% were economic, 31% were administrative, cultural, or quality of care concerns, 19% were transportation or communication problems, and 11% were access or availability problems.

Medical providers were also asked about barriers to prenatal care. The five biggest problems they reported were payment for care, late care, lack of education, AHCCCS program "red tape," and patients being unaware that the charge for prenatal care is included in the physician's charge for delivery services.

VI. Use of General Medical Services

Women were questioned regarding general medical care they had received in the past year, including sources of care, how they paid for care, and perceived barriers to care. These results are summarized below. See Homedes and LaBrec (1991) for a more detailed analysis of the data.

Table 5 shows places where women went for general medical care service in the year prior to the survey. Women tended to use more sources of care for general medical services (ratio of 1.5 sources/woman) than for prenatal care (ratio of 1.2 sources/woman). In addition, a much greater percentage of women (14% or 41 women) reported a Mexican provider as their usual source of general medical care; only 3% (or four women) identified a Mexican provider as their usual source of prenatal care. Finally, the community health center, rather than a private physician, was reported as the most frequently used source of general medical care.

TABLE 5

Places Women Went for Health Care Services
Nogales, Arizona (Fall 1990)

Place	Number of Responses (n)	Percent of Responses (n/448)*100	Percent of Women (n/290)*100
CHC or Clinic	124	27.7	42.8
Private Doctor in AZ	108	24.1	37.2
Private Doctor in Mexico	54	12.1	18.6
Hospital in Nogales, AZ	43	9.6	14.8
Pharmacy in Mexico	42	9.4	14.5
Pharmacy in US	23	5.1	7.9
Other US Service	22	4.9	7.6
Other US Hospital	20	4.5	6.9
Other Mex Service	4	0.9	1.4
IMSS/ISSTE	3	0.7	1.0
Hospital in Nogales, SON	2	0.4	0.7
Other Mex Hospital	2	0.4	0.7
Curandero/Sobador	1	0.2	0.3
	448	100.0	154.4

(Mexican services appear in italics.)

Working women were more likely to seek care in Mexico than nonworking women ($p = .0198$). Twenty-seven percent of places of care listed by working women (or 93 places of care) were in Mexico compared with 15.5% of those listed by nonworking women (or 16 places of care).

Uninsured women comprised 46% of the sample, or 189 women. They reported receiving significantly fewer health care services in the past year (64% women received services) than the insured women (77% received services) at $p < .01$). Women without insurance most frequently obtained general medical services at the community health center, followed by private offices in the U.S. and in Mexico. Uninsured women tended to use Mexican providers more frequently than women with insurance: 32% of the providers or facilities used by uninsured women were Mexican and 19.8% of services used by insured women were Mexican.

Fifty-four percent of the women in the community survey (or 218 women) reported problems obtaining general medical care. Most commonly cited difficulties were financial, poor quality of care, transportation, and cultural issues. Medical providers identified a number of barriers to care, including financing, inadequate local services, lack of awareness of need for care, confidentiality problems, and continuity of care issues.

VII. a. Substance Use: Cigarette Smoking

Women in the community survey were asked if they had smoked at least one cigarette in the past year. Thirty-eight percent or 155 women reported having smoked at least one cigarette.

Reported smoking was significantly related to marital/relationship status (p = 0294). Separated/divorced women were the most likely to smoke (48% or 27 women smoked), single women were the next most likely to smoke (46% or 46 women smoked), women who were married/cohabiting were the next most likely to smoke (32% or 81 women smoked), and widows were the least likely to smoke (25% or 1 woman smoked).

Women who had a child under five were less likely to smoke. Thirty-three percent (n = 77] of these women smoked versus 44% [n = 78] of women without a child under five (p = .0278).

Age, education, family income, number of years living in the U.S., country of birth, documented status, having health insurance, use of health services in the past year, working outside the home, and having a child under one year of age were not related to smoking behavior.

Medical providers estimated that a mean of 25.4% of their female patients smoke cigarettes.

Previous research suggests that between 24% and 28% of Mexican American women smoke (Lee and Markides, 1991; Escobedo and Remington, 1989; Fiore et al., 1989; Marks et al., 1990). The data from the community survey are likely to be overestimates of current smoking status due to the manner in which data was elicited about smoking behavior (i.e., women were asked if they had smoked at least one cigarette in the past year).

b. Substance Use: Use of Alcohol

Women were questioned about having drank at least one alcoholic beverage in the past year. Sixty-seven percent (or 274 women) reported having drank at least one alcoholic beverage.

Women were less likely to drink if they had a child under 1 year of age. Fifty-four percent (n = 46) of women with children reported drinking compared to 70% (n = 228) of women without children (p = .0036). Or, if they had children under five years old, 61% (n = 141) of women with children reported drinking compared to 75% (n = 133) of women without children (p = .003).

Women with higher family incomes were more likely to report drinking (Table 6). The relationship between income and alcohol use did not change when examining country of birth and documented status.

TABLE 6

Reported Use of Alcohol
By Family Income*

	Less than $6,000		$6,000-9,999		$10,000-19,999		$20,000-29,999		$30,000 39,999		$40,000 or more	
	%	n	%	n	%	n	%	n	%	n	%	n
Use of Alcohol	59	48	61	54	67	74	66	33	86	19	84	32
No Use	41	33	39	34	33	36	34	17	14	3	16	6

*p = .0312

Overall, U.S.-born women were most likely to drink, Mexican-born documented women were next most likely to drink, and Mexican-born undocumented women were the least likely to drink in the past year (p = .0081) (See Table 7). The same pattern emerged among women with lower educational attainment (highest grade completed was less than or equal to the median of 11 years for the sample), as shown in Table 8. However, there was no difference in reported drinking based upon country of birth and documented status among women with higher educational attainment. In addition, number of years living in the U.S., per se, was not related to reported drinking behavior.

TABLE 7

Reported Use of Alcohol In Past Year
By Place of Birth and Documented Status*

	US-Born		Mexican-Born Documented		Mexican-Born Undocumented	
	%	n	%	n	%	n
Use of Alcohol	76	111	64	149	50	14
No Use	24	36	36	85	50	14

*p = .0081

TABLE 8

Reported Use of Alcohol
Among Women of Lower Educational Attainment+
By Place of Birth and Documented Status*

	US-Born		Mexican-Born Documented		Mexican-Born Undocumented	
	%	n	%	n	%	n
Use of Alcohol	80	20	63	86	46	11
No Use	20	5	37	50	54	13

+Less than or equal to 11 years *p = .0462

Women were more likely to drink if they worked outside the home (71% . Seventy-one percent (n = 226) of working women drank versus 51% (n = 48) of nonworking women (p = .0003).

Age, education, marital/relationship status, use of health services in the past year, and health insurance were not related to drinking behavior.

In order to estimate the extent of alcohol abuse, women were also asked the CAGE screening questions, i.e., if they had "felt the need to cut down" on their drinking (21 women or 5% said yes), "felt annoyed by people complaining" about their drinking (11 or 3% said yes), "felt guilty" about their drinking (9 or 2% said yes), or "drank an eye-opener in the morning to relieve the shakes" (2 or 0.5% said yes). Altogether, only six women (2.2% of the sample) answered yes to two or more of these questions,

which is the accepted criterion for diagnosis of alcoholism on this screening test (Ewing, 1984).

Medical providers estimated that a mean of 6.8% of their female patients abuse alcohol. Providers were not asked to estimate the proportion of their female patients that have used any alcohol in the past year; hence there is no comparison possible with the community survey data on any use of alcohol. Marks et al. (1990) reported that 34.7% of Mexican American women surveyed were current users of alcohol, with 1.2% drinking one ounce or more of ethanol daily. Only 2.2% of this sample fulfilled the criteria for alcohol abuse based upon the CAGE questions. Although this is similar to Marks et al.'s findings on abuse, it is not known to what extent the CAGE screening test is a valid measure of alcohol abuse in Mexican Americans.

A number of studies have found a significant relationship between acculturation and drinking in younger Mexican American women, i.e., the greater the acculturation, the greater the alcohol use (Markides et al., 1990). Although this study did not investigate acculturation, per se, the findings of greater alcohol use in U.S.-born compared with Mexican-born women is consistent with previous data.

This survey also corroborated the findings of Caetano, 1990, that employed women are more likely to drink alcohol.

c. Substance Use: Use of Both Alcohol and Tobacco

The data were further analyzed to look at the group of 128 women (or 31% of the sample) who reported both smoking and drinking in the past year. Women who reported smoking were significantly more likely to report drinking as well. Eighty-three

percent of smokers (n=128) reported drinking and 57% of nonsmokers (n=146) reported drinking (p=.0000). These data are consistent with data from the HHANES showing a significant correlation between smoking and drinking by Mexican American women (Lee and Markides, 1991).

Single women were the most likely to smoke and drink followed by divorced/separated women, married/cohabiting women, and widowed women, as shown in Table 9 (p = .0252). Women without children under five were also more likely to report smoking and drinking. Thirty-nine percent (n = 70) of those without children reported smoking and drinking compared with 25% (n = 58) of those with children under five (p =.0019).

TABLE 9

Reported Use of Alcohol and Tobacco
By Marital/Relationship Status*

	Single		Married/ Cohabit		Separated/ Divorced		Widowed	
	%	n	%	n	%	n	%	n
Use of Alcohol and Tobacco	42	42	26	65	36	20	25	1
No Use	58	58	74	186	64	36	75	3

*p = .0252

Reported smoking and drinking was not related to age, education, family income, country of birth, number of years living in the U.S., or documented status. Women who reported smoking and drinking were as likely to have health insurance and to have used health services in the past year as those who neither smoked nor drank.

d. Substance Use: Use of Other Drugs

When asked about use of drugs other than alcohol or tobacco in the past year, only six women (1.5%) admitted using marijuana; none admitted using cocaine or other "street" drugs.

Medical providers estimated that 5.6% of their patients use marijuana, 3.5% use cocaine, and 1.6% use heroin. When providers were asked about tranquilizer use, they estimated that 12.8% of their patients use tranquilizers. Unfortunately, providers were not asked specifically about abuse or dependence on prescription medications.

HHANES data on the proportion of Mexican American women using marijuana and cocaine in the past year (Amaro et al., 1990), 6.6% and 2.1% respectively, were higher than reported use in this survey. It is not known whether these differences reflect characteristics of a border community, concerns about confidentiality, or other issues.

VIII. a. Substance Use During Pregnancy: Cigarette Smoking

Women were asked if they had smoked at least one cigarette during pregnancy (a pregnancy which occurred in the past two years). Nineteen percent (or 31 women) responded that they had. These women were slightly older than those who did not

smoke (mean age 29 years versus 27 years). They also completed slightly less education (mean of 9.8 years versus 11 years of schooling). However, these differences were not statistically significant.

There was no difference in family income between smokers and nonsmokers. Neither was smoking during pregnancy related to marital/relationship status, country of birth or documented status, number of years living in the U.S., or reported drinking of alcohol in the past year.

Women who smoked during pregnancy were as likely to have health insurance and to have used health services in the past year as those who did not smoke during pregnancy. In addition, these women smokers were as likely to have received early (first trimester) prenatal care (71%) and to have had at least five visits (90%) as women who reported not smoking during pregnancy. It should be noted that a number of women mentioned that they stopped smoking when they discovered that they were pregnant. It is not known to what extent these women had been advised by their health providers to stop smoking. These data emphasize that there is ample opportunity for smoking cessation intervention as a routine part of prenatal care.

Medical providers estimated that 9.9% of pregnant women patients smoked during pregnancy. How do these data compare with the results from the community survey? Unless a majority of women stop smoking after learning that they are pregnant, it appears that providers underestimate smoking by their pregnant patients. A recent study indicated that 27% of White women smokers stopped smoking after

confirmation of pregnancy (Fingerhut et al., 1990). It is not known if the prevalence of smoking cessation would be similar in a Mexican-American border population.

b. Substance Use During Pregnancy: Use of Alcohol

In the community survey, 30% of the sample (or 49 women) reported drinking at least one alcoholic beverage during their last pregnancy (in the past two years).

Women who drank during pregnancy were as likely to have health insurance and to have used health services in the past year as those who did not report drinking. Similarly, there was no difference in the number of prenatal care visits these women had (96% of those reporting drinking had at least five visits). Interestingly, women reporting drinking were more likely to have had early (first trimester) prenatal care. Eighty-eight percent (n = 43) had early care compared with 72% (n = 82) of nondrinkers (p = .0284).

Again, this emphasizes the opportunity for prevention of alcohol-related medical problems during routine prenatal care. The same caveats apply here as with smoking and pregnancy; however, many women stated that they did not drink after they learned that they were pregnant, and unfortunately there is no data to assess the role of health providers in these women's decisions to not drink during pregnancy.

Women who were separated or divorced at the time of the survey were more likely to report having drank during pregnancy compared with women who were single or married/living with partner, as shown in Table 10 (p=.0044). The data should be interpreted with caution for two reasons. First, it is not known whether the marital/relationship status at the time of the survey was the same as during pregnancy.

In addition, the small number of women in some of the relationship categories makes the result less certain.

TABLE 10

Reported Use of Alcohol During Pregnancy
By Marital/Relationship Status*

	Single		Married/ Cohabit		Separated/ Divorced		Widowed	
	%	n	%	n	%	n	%	n
Use of Alcohol	25	5	26	33	66.7	10	100	1
No Use	75	15	74	94	33.3	5	0	0

*p = .0044

There was no difference in age, educational level, country of birth, documented status, number of years living in the U.S., or family income between women who drank during pregnancy and those who did not.

Medical providers estimated that 5% of pregnant women patients use alcohol. Comparing this estimate with the community survey data, it appears that providers greatly underestimate drinking by their pregnant patients, unless a substantial majority of women stop drinking after confirmation of pregnancy. Unfortunately, there is no information from this study on cessation of alcohol use during pregnancy.

c. **Substance Use During Pregnancy: Use of Both Alcohol and Tobacco**

Of the 163 women who had a pregnancy in the past two years, 15 (or 9%) reported both smoking and drinking during pregnancy.

These women were more likely to be older than those who neither smoked nor drank, although this did not reach statistical significance. Seventy-three percent (n = 11) of women who smoked and drank were greater than the median age of 26 years compared with 47% (n = 70) of women who neither smoked nor drank (p = .0546).

Reported smoking and drinking during pregnancy was not related to marital/ relationship status, education, family income, country of birth, documented status, or number of years living in the U.S.

Women who reported drinking and smoking during pregnancy were as likely to have health insurance (47% had insurance), to have used health services in the past year (80% used services), to have had early (first trimester) prenatal care (80% had early care), and to have had at least five prenatal visits (93%) compared with women who neither smoked nor drank during pregnancy.

Women who smoked during pregnancy were significantly more likely to drink during pregnancy (p = .0134). In fact, nearly twice as many smokers drank alcohol during pregnancy as nonsmokers: 48% (n = 15) of smokers drank versus 26% (n =34) of nonsmokers.

d. Substance Use During Pregnancy: Use of Other Drugs

One woman (0.6%) admitted to using marijuana during pregnancy and one woman (0.6%) admitted to using cocaine during pregnancy.

Medical providers estimated that 2.8% of their pregnant patients use marijuana, 1.4% use cocaine, and less than 1% use other "street" drugs during pregnancy.

IX. Domestic Violence

Women were asked if they had experienced physical abuse by their current or former male partner/spouse in the past year. Abuse was defined in a behaviorally specific way using a modification of the Conflict Tactics Scales (Straus et al., 1980).

Ten point three percent of the women in the community survey (or 42 women) reported that they had experienced abuse. This figure is similar to data reported in the 1985 National Family Violence Survey (Straus and Gelles, 1986). It is important to remember that incidence and prevalence figures are underestimates due to feelings of shame and embarrassment, denial, and concerns about confidentiality. Although the community interviewers established good rapport in general, there were a number of interviewer reports questioning the validity of these data due to the presence of the spouse/male partner or other family members, and indications of respondent discomfort such as laughing, looking down, or hurriedly saying "no" to the question.

Abused women were more likely to be separated or divorced than married/cohabiting or single women ($p = .0001$; see Table 11). Unfortunately, it is not known whether the abuse preceded or followed the separation/divorce. Previous research indicates that separation/divorce does not convey protection against abuse,

and in fact, the risk of abuse for a married woman falls only with widowhood (Flitcraft, 1977).

TABLE 11

Reported Domestic Abuse
By Marital/Relationship Status*

	Single		Married/ Cohabit		Separated/ Divorced		Widowed	
	%	n	%	n	%	n	%	n
Reported Abuse	5	5	9	22	27	15	0	0
No Abuse	95	95	91	228	73	41	100	4

*p = .0001

There was a statistical trend (p = .0822) for women reporting abuse to be more likely to report drinking alcohol in the past year. Seventy-nine percent (n = 33) of women reporting abuse drank alcohol versus 65% (n = 240) of those not reporting abuse. It is important to interpret this finding with caution. Research examining the relationship between domestic violence and alcohol suggests that abused women have a four-fold increase in risk of alcohol abuse, but that alcohol abuse begins after the physically abusive relationship has been established (Stark et al., 1981). In addition, in this study, alcohol use rather than abuse, was assessed, and there was no data collected about drinking by the woman's spouse/male partner.

There was also a statistical trend (p = .061) for women witha family income of less than $10,000 to report abuse more often. Thirteen percent (n = 22) reported abuse) than women with incomes equal to or greater than $10,000 (7.3% [n = 16] reported abuse). Similarly, there was a trend (p = .0916) for women, who completed less than 12 years of education, to report abuse more often than women who had graduated from high school. Thirteen percent (n = 24) of women with less education reported abuse compared with 8% [n = 18] of those with more education.

Overall, country of birth/documented status was not statistically related to reporting of abuse. However, looking at subgroups of women defined by family income, there was a statistical trend among the higher income group ($10,000 per year or more). Specifically, Mexican-born undocumented women were the most likely (50% [n = 1] reporting abuse), Mexican-born documented women were the next most likely (8% [n = 9]), and U.S.-born women were the least likely to report abuse in the past year (6% [n = 6]) (p = .0594). This should be interpreted with caution due to the small number of subjects in many of the cells.

Abuse was not related to age, number of years living in the U.S., or having a child of five years or under.

Abused women were as likely to have health insurance and to have used health services in the past year (76% used services) as women not reporting abuse. This high prevalence of health care utilization affords the opportunity for health care providers to identify and refer abused women and their partners for treatment.

Medical providers estimated that they saw a mean of 16 patients in the past year with suspected physical abuse (half were abused during pregnancy). Female providers reported twice as many patients suspected of experiencing physical abuse as male providers (a mean of 23 versus 13 patients). It is likely that the lack of statistical significant between male and female providers was due to the small provider sample size (n =16).

The large discrepancy between providers' estimates of abused women seen in clinical practice and women's self reports of abuse is likely due to the well-documented failure of providers to recognize abuse (McLeer and Anwar, 1987, 1989; Burge, 1989; Stark et al., 1979). For example, empirical data suggests that only one in ten women presenting with injuries related to abuse are recognized to be abused women (Stark et al., 1979). The lack of use of routine questions about abuse during the provision of pregnancy care results in severe under-diagnosis in this clinical setting as well (Helton et al., 1987).

X. Domestic Violence During Pregnancy

A number of investigators have demonstrated that pregnancy is a time of increased risk for domestic violence (Helton et al., 1987; Stark et al., 1981). In this survey, 9.2% of the women (or 33 women) reported physical abuse by their current or former male partner or spouse while they were pregnant (not necessarily a pregnancy in the past two years). This corresponds with other data indicating that 8% of women report abuse during a current pregnancy, and 15% report past abuse (Helton et al., 1987).

As seen for women reporting abuse in the past year, women abused during pregnancy were more likely to be separated or divorced than married/cohabiting or single (p=.0001). This is shown in Table 12. Again, it is not known whether the abuse preceded or followed the divorce or separation.

TABLE 12

Reported Domestic Abuse During Pregnancy
By Marital/Relationship Status*

	Single		Married/ Cohabit		Separated/ Divorced		Widowed	
	%	n	%	n	%	n	%	n
Reported Abuse	8	4	6	14	26	14	25	1
No Abuse	92	46	94	234	74	41	75	3

*p = .0001

Abuse during pregnancy was not related to country of birth and documented status overall. However, among women of low educational attainment (those with less than or equal to 11 years of schooling, the median level of education of the sample), U.S.-born women were the most likely to report abuse during pregnancy, Mexican-born undocumented women were the next most likely, and Mexican-born

documented women were the least likely to report abuse during pregnancy ($p = .0179$). This is shown in Table 13.

TABLE 13

Reported Domestic Abuse During Pregnancy
Among Women With Lower Educational Attainment+
By Place of Birth and Documented Status*

	US-Born		Mexican-Born Documented		Mexican-Born Undocumented	
	%	n	%	n	%	n
Reported Abuse	24	5	6	7	13	3
No Abuse	76	16	94	119	87	20

+Less than or equal to 11 years *$p = .0179$

Abuse during pregnancy was not related to having a child five years old or less, family income, education, or reported alcohol use by the woman.

Thirteen of the women who reported abuse during one of their pregnancies stated that this had happened during a pregnancy in the past two years, representing 8% of women who had recently been pregnant.

Among this subgroup, women born in the U.S. were more likely to report abuse (16% [n = 8] reported abuse) than women born in Mexico (5% [n = 5] reported abuse) ($p = .0339$). In addition, Mexican-born undocumented women were more likely to

report abuse than Mexican-born documented women (13% [n = 3] and 2% [n = 2], respectively; p = .0124). These results must be interpreted with caution due to the small sample size. However, they are consistent with the previously presented data on domestic violence experienced by women during any past pregnancy.

As previously discussed, women reporting abuse during pregnancy were as likely to have health insurance, to have used health services in the past year, to have obtained early (first trimester) prenatal care, and to have obtained five or more prenatal visits as women who did not report abuse during pregnancy.

XI. Eating Disorders

Women in the community survey were questioned regarding their perception of their own weight. Fifty-five percent (or 225 women) said that they were "too heavy", 41% (167 women) said they were "just about right," and 5% (19 women) said they were "too light."

In an attempt to estimate prevalence of certain purging behaviors, women were questioned regarding vomiting, use of laxatives, and skipping meals to control their weight. Two percent of women (or 10 women) reported vomiting to lose weight, 3% (12 women) reported using laxatives, and 27% (110 women) reported "skipping meals."

Medical providers estimated that 2.6% of their female patients have eating disorders. They further estimated that 44% of their female patients are overweight. Of course, all people who are overweight do not have eating disorders.

No attempt was made to verify providers' definition of eating disorders. It is unclear how many of the community women reporting vomiting, laxative use and skipping meals would fulfill the medical diagnosis of an eating disorder.

There is wide variability in the literature in the estimates of prevalence of eating disorders (Hsu, 1990). It is clear, however, that anorexia nervosa and bulimia nervosa are not uncommon in women, and that these disorders do occur in non-White populations (Silber, 1986).

XII. Conclusions and Recommendations

1. A majority of women (67%) reported current use of family planning. Medical providers were concerned that many of their patients have inadequate knowledge of contraception.

   Women in the community survey and medical providers had similar suggestions to improve family planning services including financial assistance and more discounted charges for services, centralized family planning care, and educational outreach to the community and to the schools.

2. Fifty-nine percent of women reported having had a Pap smear in the past year, and 61% reported a recent provider breast examination. Women who had these preventive services were more likely to have health insurance and to have had a recent pregnancy, implying that the majority of the provision of these services are done in the context of prenatal care. Interestingly, working women were significantly less likely to have had Pap smears or provider breast examinations and 78% of these women had not had a recent pregnancy.

These data suggest the need to increase the access of working women (and all non-pregnant women) to preventive health services such as Pap smear and provider breast examinations. Strategies to accomplish this might include expanding office hours to evenings and weekends, and making the provision of these services routine in the general medical setting.

3. Fifty-nine percent of women reported performing breast self-examination in the past year. These women were more likely to report performing breast self-examination than nonworking women.

These data suggest that educational outreach, particularly to those women not performing breast self-examination might be worthwhile. In addition, routine teaching of breast self-examination in health care facilities (and not only in the prenatal care setting) may encourage more women to perform breast self-examination.

4. The vast majority (over 75%) of women obtained early and frequent prenatal care. A substantial minority of pregnant women (12%) obtained care in Mexico. The greatest barriers to care identified by the women and medical providers were financial. Continuity and quality of prenatal care would be greatly enhanced by developing a system to coordinate prenatal care among the American and Mexican providers used by pregnant women in this border community. In addition, addressing financial barriers to care would be important.

5. Only 54% of women had health insurance at the time of the survey. Women without insurance were more likely to have lower family incomes than women with insurance. Those without insurance received significantly less medical care in the past year, and also received substantially more care in Mexico.

The clear financial barrier to health services, particularly preventive services, has been well documented by many investigators. Addressing these issues, especially in this low income border community, is vital. Again, coordination and cooperation among medical providers on both sides of the border would facilitate the provision of quality health care to residents on both sides of the border.

6. A substantial proportion of women reported at least some smoking (38%) and drinking (67%) in the past year. Women who reported alcohol use were more likely to have a higher family income, to be U.S.-born or documented, and to be working outside the home. In addition, 31% of women reported using both alcohol and tobacco in the past year.

Similarly, a sizeable proportion of women reported using tobacco (19%), alcohol (30%), or both (9%) during pregnancy, although an unknown number of these women may have stopped using after their pregnancy was confirmed. Smokers were twice as likely to drink during pregnancy as nonsmokers.

Women reporting alcohol and/or tobacco use in the past year were as likely to have health insurance and to have used general medical services as

women who abstained. Likewise women reporting alcohol and/or tobacco use during pregnancy were as likely to have health insurance and to have used early and frequent prenatal care as women who abstained. Medical providers appeared to underestimate the use of alcohol and tobacco by their pregnant patients.

These data suggest that primary prevention and early intervention could be accomplished in the clinical setting. In addition, medical education as well as community education and outreach is warranted.

7. Approximately 10% of women reported experiencing domestic violence by a current or former spouse/male partner in the past year. A similar percentage reported domestic violence during pregnancy. As previously discussed, these data are likely an underestimate of actual incidence and prevalence of domestic abuse. The relationships among abuse and various sociodemographic variables is complex, and the small sample size of this study precluded definitive characterizations of the women most at risk for experiencing abuse in this border community.

However, results clearly indicate that women reporting abuse are as likely to have health insurance, to have used medical services, and to have obtained early and frequent prenatal care as women who did not report abuse. These data also demonstrate the failure of medical providers to identify the majority of abused women that are seen in clinical practice, as has been demonstrated in a number of other geographic and clinical settings.

Community education and outreach concerning domestic abuse as well as medical provider education is warranted. These data refute the often held assumption that abused women are by definition a "hard to reach" population. The provision of medical care services provides an unequaled opportunity to identify, treat, and refer abused women and their children, and to refer their abusive partners to the appropriate community services as well.

Further study is needed to delineate the particular needs of abused women living in this border region, in order to develop appropriate prevention and intervention strategies.

8. A number of women in the community survey reported vomiting, using laxatives, and skipping meals to control their weight. In addition, over one-half of the women felt that they were "too heavy." It is unclear how many women in our sample would fulfill the DMS III-R criteria for an eating disorder. However, it appears that certain behaviors that are suggestive of eating disorders occur with some frequency among Nogales women. Further study is warranted.

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